



Renewable Energy Consumer Code's response to BEIS's and Ofgem's Call for Evidence on a 'Smart, Flexible Energy System', winter 2017

Renewable Energy Consumer Code (RECC) is a consumer code originally set up in 2006 to maintain high standards of consumer protection for businesses that sell and install small-scale renewables systems in the domestic sector. RECC currently has 2,600 members. The Code is approved by Chartered Trading Standards Institute (CTSI) under its Consumer Codes Approval Scheme (CCAS). It is administered by Renewable Energy Assurance Ltd (REAL), a wholly-owned subsidiary of the Renewable Energy Association (REA), a major trade association in the renewables sector.

The RECC Code dovetails with the Micro-generation Certification Scheme (MCS) under which only consumers of MCS-certified products installed by MCS-certified installers are eligible for Government incentives for renewable energy generation. The MCS installer standards require installers to be a member of a CTSI-approved consumer code such as RECC.

The Code extends beyond MCS and covers additional technologies where these are sold to go alongside a renewable energy system, either as a package or as an add-on, such as small-scale battery storage systems, voltage optimisers and i-boost systems.

RECC is pleased to respond to BEIS's and Ofgem's Call for Evidence. RECC's objective is to ensure that consumers are well-informed and well-protected and are thus in a position to take full advantage of the opportunities on offer to reduce the carbon impact of their energy usage. We fully support the response submitted by REA, our parent company.

RECC welcomes and supports BEIS's and Ofgem's ambition and objectives for a smart, flexible energy system which underpin the Call for Evidence. In particular, we welcome BEIS's and Ofgem's objective to help consumers gain control of their bills and the amount of energy they use. RECC urges them to ensure that all consumers, and in particular domestic consumers, are in a position to do this, and that this does not remain the preserve of the better-off, savvy consumers at the expense of those on lower incomes for whom energy represents a higher percentage of their incomes. We caution against adopting the 'buyer beware', early adopter approach which initially characterised the small-scale renewable market and which led to widespread mis-selling, poor installations and consumer detriment. Adequate safeguards at the outset will ensure that maximum benefits can be derived, for individuals, for the system and for the planet.

RECC has only responded, below, to the questions on which it has a point of view and evidence to submit.

2. Removing policy and regulatory barriers

Enabling storage

The market for 'behind the meter' domestic battery storage is set to grow rapidly as prices come down. Already, the majority of solar PV installers applying to join RECC indicate that they also intend to offer battery storage. Domestic consumers are increasingly installing battery storage alongside a solar PV system, either as a package or as an add-on as a means of boosting the amount of renewable energy generation they are able to benefit from on-site i.e. to increase their 'self-consumption'.

The domestic market is at a similar phase to the electric vehicles (EVs) market which the Call for Evidence sees as '*poised to move out of the 'early adopters' phase*'. The introduction of half-hourly settlement (HHS) and the smart retail tariffs it will facilitate is expected to boost sales of batteries to homes.

As with EVs, then, so for domestic battery storage: there is a '*window of opportunity to shape norms, expectations and markets ...[to]...meet the needs of both consumers and the electricity system, before [they] become truly mass market*'.¹

The Code specifically includes battery storage and other 'related products' within its scope. Thus members of RECC offering storage are required to comply with the relevant provisions of the Code, are subject to our monitoring programme and dispute resolution procedures (including arbitration) and are liable to disciplinary action for breaching the Code. However, the issue for us is that, unlike installers of small-scale renewable generation, sellers and installers of battery storage are not obliged to be RECC members: battery storage systems are not required to be MCS-certified products and do not have to be installed by MCS-certified installers, even where they are linked to an MCS-certified system (as most in-home systems currently are). On this basis, installers are not obliged to be a member of an approved consumer code.

There is no specific regulatory mechanism beyond the protections that consumer law bestows to ensure that domestic battery storage performs as described or is appropriate or safe in the setting in which it is installed. As evidence that something more is needed, RECC has seen a rapid rise in the number of complaints it receives in which batteries are involved. In around a third of all the complaints received where a contract was signed, the contract was for a battery only i.e. could lie entirely outside the MCS/RECC remit.

RECC received its first recorded complaint about a battery storage system - a grossly-over-priced system installed in the home of an elderly vulnerable consumer – in 2013². Since then, we have received nearly 100 further complaints, the majority of them in 2016: RECC registered 61 complaints about battery storage systems, in the year to 15 December 2016. Half of the complaints received last year concerned mis-selling, while a third reported technical problems or issues with the installation. A summary of these is attached as Appendix 1.

¹ p.63

² The system was subsequently removed and the consumer refunded.

By way of example, the sorts of mis-selling reported include:

- falsely claiming to be RECC or MCS or that batteries are MCS-certified (none are as yet);
- quoting an initial high price, then discounting to get a signature on the night;
- staying 3 hours in an elderly woman's home insisting she sign up;
- telling the consumer there are government grants for storage;
- claiming an £8200 package would pay for itself within 10 years;
- telling the consumer a particular battery would operate in a power-cut - it won't;
- claiming the consumer would get additional Feed-In Tariffs for the battery system both when it charged and when it discharged;
- reportedly targeting vulnerable consumers;
- telling the consumer they are coming 'to service your PV system' or 'sending an engineer to sort your PV problem', then sending a salesman;
- selling a £6.5k battery system to an elderly retired consumer who's at home all day (and using much of the PV output of her small system already), claiming she'd get £800+ savings a year;
- print advertisements making unreasonable claims for batteries e.g. '*never worry about having another power cut again*' and '*never worry about electricity price increases again*'.

In 2015 RECC worked with BRE National Solar Centre to produce guidance for consumers on whether or not battery storage is appropriate for them. We also prepared guidance for installers on the information they should provide when seeking to sell a battery storage system. Finally, we have taken part in discussions in IET in preparation for their industry code of practice. All of these developments are useful and very welcome, but they are not mandatory and so consumers have no readily-enforceable guarantee that a system they install is reliable or will perform as they have been informed they would.

RECC considers it to be essential that there is regulatory clarity and that domestic consumers can have confidence that they are not being mis-sold battery storage and that it will be installed correctly. And there is some urgency here, given the likely boost to attempted sales of batteries in the wake of the introduction of domestic HHS.

To this end we think battery storage needs to be incorporated into the MCS Scheme with products and those selling and/or installing them having to be MCS certified. As part of a future MCS storage installer standard, installers must be responsible for any negative impacts connection of energy

storage might have on the performance of a pre-existing solar PV system. The standard also needs to include a mandatory formula for presenting performance, savings and payback information.

Any regulatory change should also ensure that domestic storage (and domestic EV charging systems) are subject to the consumer protection provisions recommended in the 'Each Home Counts' Review³, as an absolute minimum. In addition, we share REA's view that regulatory clarity is required in relation to the DNO requirements on notification of domestic behind the meter storage⁴.

Furthermore, there is a noticeable lack of centrally-collated data on storage devices. The REA has made the case in its response for national data and greater information sharing for the benefit of the DNOs and System Operation. It would also be valuable for consumer protection purposes: it is not currently possible to know, for example, what proportion of battery systems are giving rise to complaints that come to RECC since there is no central register of systems going into homes. We consider the proposed ESN definition for storage to be acceptable. However, we urge BEIS and Ofgem to ensure that any definition adopted in primary or secondary legislation does not have unintended consequences for small-scale battery storage systems. Typically these are currently linked to renewable electricity generation, and do not export directly onto the grid. However, they could reduce the volume of electricity being exported directly onto the grid.

Aggregators

Here again, RECC is concerned that the interests of domestic consumers should not be left to some later date to be properly considered. We have evidence that some would-be aggregators are targeting domestic consumers with complex offers which they find difficult to understand.

We consider that some form of accreditation scheme for aggregators, along the lines of that preferred by consumer representatives in relation to Third Party Intermediaries, is required. This should be run by Ofgem and accompanied by a new licence requirement on suppliers that obliges them to only deal with accredited providers.⁵ The accreditation should require aggregators to sign up to an appropriate code of conduct.

Consideration should be given either to extending the industry-led ADE code of conduct to cover domestic DSR or to a separate Code for aggregators in the domestic market if there is a need for it. We would be happy to work with ADE to ensure that the domestic requirements are fit-for-purpose.

³ Each Home counts: an independent review of consumer advice, protection, standards and enforcement, for energy efficiency and renewable energy, December 2016

⁴ [REA response to Flexibility Call for Evidence](#)

⁵ Consumer Futures (2013), Response to Third Party Intermediaries: exploration of market issues and options consultation. Quoted in Citizens Advice Bureau, 2014, Take a walk on the demand-side: Making electricity demand side response work for domestic and small business consumers'

As a minimum, consumers should be provided with clear, comprehensible and truthful information about what they are being offered. They should be clear about the effect any DSR activity would be likely to have on their domestic life and how their data privacy will be respected. We consider that any aggregator intending to engage with domestic consumers should be required to comply with the code of conduct which should therefore be mandatory.

3. Providing price signals for flexibility

System value pricing

Reflective pricing could be an effective means of reducing domestic consumers' energy bills. To take advantage of this, as the Call for Evidence states, consumers will require effective smart metering, including (HHS), together with a two-way interface which can provide up-to-date information on tariff levels. Care needs to be given to ensuring that all consumers, including those most in need of reduced energy bills, have access to the hardware and software that will allow them to participate in the responsive DSR environment or are protected from higher bills if they cannot participate. Mandatory HHS should not be introduced until these conditions have been met.

Smart retail tariffs

Smart retail tariffs have the potential to benefit domestic consumers if the conditions outlined above, and in the Call for Evidence, are fulfilled. RECC agrees that suppliers should be incentivised to offer smart retail tariffs where possible. For example these incentives could be in the form of lower network charges in return for domestic consumers using less centrally-generated electricity at peak times. We echo REA's call here for a Significant Code Review which would provide the context for more flexible network charging going forward.

There will be a considerable need for consumer education and independent information alongside the introduction of price signals in the form of smart retail tariffs. Otherwise consumers could inadvertently end up worse off. In a study of Time of Use (ToU) tariffs conducted by British Gas and Northern Powergrid, 60 per cent of participants benefited but 40 per cent paid more than they would have done otherwise.⁶ Research carried out by Consumer Focus suggested a lack of understanding of who can, and how to, benefit from the most common existing Time of Use (ToU) tariffs⁷: 38% of those on Economy 7 either should not have been on the tariff (because they had no storage heater) or were not making efficient use of it (i.e. were not running appliances at night). They were therefore paying more than they needed to.

⁶ Customer-Led Network Revolution (2014), Progress Report 7

⁷ Consumer Focus (2012), From devotees to the disengaged: A summary of research into energy consumers' experiences of Time of Use tariffs and Consumer Focus's recommendations. The research found some 13% of domestic electricity consumers in the UK were then on some form of ToU tariff, the most common being Economy 7.

In addition, given the potential for such tariffs to be confusing and complex, RECC considers that Ofgem should be obliged to ensure that any retail smart tariffs offered comply with a set of minimum requirements. This is particularly so for dynamic time-of-use and load control tariffs which will be entirely unfamiliar to virtually all domestic consumers. In practice, Ofgem could outsource the task of ensuring that smart retail tariffs comply with these minimum requirements, for example by means of a third party 'certification scheme'. RECC would be interested in discussing how this could be taken forward and in taking part in it.

As far as domestic consumers are concerned, the roll-out of smart meters is a pre-requisite for smart retail tariffs. This means that suppliers will not be in a position to offer such tariffs until the roll-out has been completed. Nonetheless, there is no reason why Ofgem should not already explore a formula according to which suppliers can pay reduced network charges in return for load reduction. In this way the charges can be rolled out as soon as they become appropriate.

Other Government policies

Existing renewables support schemes must accommodate the co-location of renewables and battery storage, if necessary allowing for separate metering where storage can import from the grid. Community-level storage should be promoted: Case 1 shows that storage can bring the most rapid benefit at a size suitable for a community energy scheme.

As set out above, RECC considers network charging to be an essential tool for unlocking the incentives on suppliers to offer their domestic consumers smart retail tariffs that simultaneously reduce their demand levels at peak times and reduce their energy bills.

4. A system for the consumer

RECC welcomes BEIS's and Ofgem's recognition in the Call for Evidence that the consumer is at the heart of the development of a smart energy system. We welcome the emphasis on the need for an effective consumer protection regime to be in place. This is particularly the case for domestic consumers.

Smart appliances

As the Call for Evidence states, consumers will need to have clear information regarding smart appliances and how to use them. Government needs to take into account those who are not in a position to access these appliances.

RECC agrees with the four essential principles set out in the Call for Evidence. In addition to data privacy we would add the need for data security. We have seen recently how hackers were able to access consumers' domestic appliances in order to carry out a major disruption of the internet system. To achieve this, for example, consumers' passwords would need to be randomly-generated and not uniform, and changed on a routine basis.

In the first instance RECC considers that option (b) should be adopted, and that there should be no price disadvantage to smart appliances. Once more domestic consumers become accustomed to living with smart appliances, non-smart appliances can be phased out. Manufacturers and retailers must ensure that smart appliances function as described and have the potential to deliver the promised benefits.

RECC does not consider that simply relying on labelling of smart appliances (a) would be an effective approach. RECC sees a role for labels as vectors of mandatory information, instructions and warnings. But many domestic consumers are confused by labels, and they thus have the potential to mislead. This is particularly important given that there is the potential to claim savings on energy bills which may not materialise. There is even the potential for increased energy bills in certain circumstances.

RECC agrees that wet and cold appliances could be regulated as smart. We also agree that battery storage systems should be certified to ensure that they function correctly, and are capable of interacting with smart appliances on the system. We consider that it is more important for heating and ventilation systems to function efficiently and to be thermostatically-controlled than to be smart. However, efficiently functioning, smart storage heaters could have a role to play.

If these are not already in train, BEIS should commission user trials with a view to understanding how domestic consumers interact in practice with different categories of smart appliances. In particular, trials should monitor ease of use, convenience and any savings to energy bills. These findings should inform future policy development. We will also be interested in the findings of the various projects on driver responses to smart charging of EVs and vehicle to grid services.

RECC considers that BEIS and Ofgem should work with social housing providers to encourage them to install smart appliances in their properties and to prepare easy-to-understand guidance on how to ensure they function optimally for residents. It is essential that smart appliances are compatible with smart prepayment meters and that those with smart prepayment meters are able to access smart tariffs.

Consumer engagement with Demand Side Response

RECC considers that it will first be necessary for the roll-out of smart meters to be completed, but that information should be provided on DSR as part of that.

We understand that Smart Energy's consumer engagement function could be involved in providing information on DSR and ToU tariffs, within its smart meter roll-out remit and Ofgem has issued a factsheet on DSR which could be updated. It is vital that there is objective independent information available to consumers and that there is some means of 'policing' third-party aggregators as suggested above.

Consumer protection

Our views set out in this response to the Call for Evidence throughout are shaped by what we see as necessary to protect domestic consumers and enable them to benefit from a flexible smart energy system.

Social impacts

*'From past experience it appears likely that [...]early adopters of DSR will be disproportionately constituted of more engaged consumers. Those who are better equipped to engage with complex tariff choices, have higher demand and more flexibility to change their demand habits, and are more likely to have the disposable income to buy smart appliances will be more likely to try and to benefit from DSR.'*⁸

We share the concerns of Citizens Advice that vulnerable consumers who cannot switch readily to new tariffs, or shift demand or afford to take full advantage of smart appliances should not be made worse off by their introduction. Research will be necessary to establish the impact on them and adjust policy accordingly.

One suggestion that seems to us worthy of consideration is for Ofgem to require that suppliers maintain at least one non-ToU evergreen tariff. Where they can participate, it may be that certain forms of tariff or DSR should not be offered to, for example, anyone on the Priority Services Register of a DNO.

Data and privacy

The consent framework for smart meters should apply to smart appliances. Consumer information (see below) should include an explanation of consumer rights and choices in relation to their data.

Informed consumers

We strongly urge the Government to invest in consumer education in this area. It will not be enough to rely on suppliers, particularly given consumers' lack of trust in the energy sector. For battery storage, for example, the only information we found pitched at the domestic consumer was marketing material. This led RECC to work with more technical experts to develop some consumer guidance that includes 20 questions to ask a potential installer.

We also consider that standards, Codes or accreditation schemes, where they are introduced, should include rules on the presentation of information to consumers. In storage, this should cover presenting performance, savings and payback information, for other products or services it might be more on data issues or key contract terms. And these should be enforced.

Preventing abuses

⁸ Citizens Advice Bureau, 2014, 'Take a walk on the demand-side: Making electricity demand side response work for domestic and small business consumers'

We have suggested elsewhere the sort of regulation we foresee as necessary, e.g. accreditation of aggregators and MCS-certification of storage. We also welcome industry developments such as the forthcoming IET Code of Practice on battery storage installations.

We would like to see the results of this Call for Evidence dovetailed with the recommendations of the Each Home Counts Review and with any 'son of Green Deal' that may emerge. But none of these measures will prevent abuses if compliance is not monitored or enforced effectively.

Other

A smart energy world can potentially involve the domestic consumer with a series of players: energy supplier, storage provider, aggregator, software licensor, smart appliance manufacturer. There will be a need for clarity around legal rights and particularly around *liability* and *redress mechanisms* in such a complex set-up so that the consumer does not fall between several stools.

Attention will need to be paid to contract terms and interoperability also, to ensure that consumers are not unwittingly tied in to particular providers.

Cyber security

This will clearly be a significant issue in a smart energy world, though one on which others are better placed to comment. We would refer you to the Consumers' International report on the Internet of Things⁹ which looks at the security issues from a consumer perspective. It seems likely that mandated security standards will be needed, as suggested in the Call for Evidence.

⁹ Consumers' International, Connection and Protection in the Digital Age: the Internet of Things and Challenges for Consumer Protection, April 2016

APPENDIX 1: BATTERY COMPLAINTS TO RECC

Total complaints

RECC recorded its first complaint about a battery system - a grossly-over-priced system installed in the home of an elderly vulnerable consumer – in 2013. Since then, it has recorded nearly 100 further complaints to the date of our latest analysis (15 December 2016) – see Table 1.

It is of concern that these numbers may only represent the tip of the iceberg: those with complaints may either not know how to complain or who to complain to. And there is currently no requirement that batteries themselves or battery sellers and installers be MCS-certified, nor members of RECC.

Of the complaints that have come to RECC since 2013:

- 61% concerned batteries that had been offered as part of a package with solar PV
- 28% related to contracts for a battery only (ie to be retro-fitted where a PV system was already installed).

Table 1: all complaints recorded at RECC to 15 December 2016

Total complaints ¹⁰	Contract for battery only	Contract for package of PV and battery	No contract signed
96	26	48	19

Rate of complaints

Unfortunately as there is no central register of domestic battery installations, we are unable to say what the proportion of those installations that are giving rise to complaint is. However, the trend of the rate at which RECC records complaints is clearly upwards:

- The total number of complaints recorded received in 2016 to 15 December was five times the number received in 2015.

Furthermore, the pace at which complaints are being recorded received has quickened in recent months:

- in the first 4 months of 2016, we recorded received around 1 complaint per fortnight;
- in the last quarter to 15 December, we recorded received more than 1 complaint a week (18 complaints in the 13 weeks to 15 December).

¹⁰ Companies do not have to be RECC/MCS to sell batteries on their own, so there may be many more complaints out there that we do not hear about or can't act upon.

Nature of complaints

The results of a review of all recorded complaints about batteries received at RECC in 2016 yields the following:

Table 2: type of complaint

Battery complaints to RECC, 2016	All	Potential ¹¹	Feedback ¹²	Referred onwards ¹³	Ongoing	Non- or ex-members
Total	61	13	24	7	6	12 ¹⁴

Table 3: subject of complaint¹⁵

Battery complaints to RECC, 2016	All	Selling issues	Technical/install issues	Delays to/failure to supply
Total	61	31	20	11

Complaints concerning selling techniques or mis-selling of some kind: 31

Over half of the 61 complaints (31/61) reported concerns about selling techniques or mis-selling of some kind. These include:

- One company was the subject of two complaints of pressure-selling tactics, one reporting the sales rep as quoting an initial high price, then discounting and telling the consumer there are government grants for storage, another reportedly staying 3 hours in an elderly woman's home insisting she sign up. In both cases the company claimed to be a member of RECC – it wasn't.
- A company that was aiming to charge £8,200 for a battery and an inverter, claiming it would pay for itself within 10 years (also not RECC)

¹¹ Where consumers notify us of a complaint, but haven't yet complained in writing to the company, they are asked to do so and the contact is recorded as 'Potential'.

¹² E.g. complaints about non-members, or where consumers (or whistleblowers) just want to alert RECC to a company's practices rather than seeking some resolution to a complaint, (eg if they've had a sales visit that was pressurised but they didn't go ahead with the purchase).

¹³ Complaints about MCS-certified products or installers that concern technical matters – e.g. poor installation or operation of solar PV - are usually 'referred onwards' to the relevant Certification Body (CB). Where batteries form part of such a complaint, the CB can only deal with the MCS-certified element.

¹⁴ A few companies give rise to several complaints. Hence they may only feature once as a non-member, but several times in the complaints figures.

¹⁵ Some complaints cover more than issue so the numbers broken down by subject may not add up to the overall total of complaints received.

- A consumer who was told their battery would operate in a power-cut - it won't.
- A consumer who was told she would get additional Feed-In Tariffs for the battery system both when it charged and when it discharged. She won't.
- A company advertising MCS-certified batteries (no batteries have been MCS-certified as yet). (Claim removed after RECC/MCS intervention).
- A whistleblowing former sales rep who told us a certain company (no longer trading) was targeting vulnerable consumers.
- A complaint of mis-selling to a pensioner.
- Persistent cold-calling of a consumer registered with the Telephone Preference Service. When the consumer got a salesman round (to 'waste his time as they'd been wasting mine', the rep claimed it was OK to call TPS-registered numbers because he was selling batteries, not PV.
- Print advertisements making unreasonable claims for batteries eg. 'never worry about having another power cut again' 'never worry about electricity price increases again'.
- Instances of companies attempting to sell consumers batteries on false pretences eg:
 - calling consumers telling them there's a problem with their inverters, the inverter company has gone bust and they need to buy a new one along with a battery (the inverter company is still in business and there are no problems with the inverters);
 - telling the consumer they are coming 'to service your PV system' or 'sending an engineer to sort your PV problem', then sending a salesman;
 - In one case, the company's 'technician' identified the problem with lower-than-promised PV generation as being 'because you can't store it' and the solution? A £6k battery.
- A £6.5k battery system retro-fitted to a small PV system for an elderly retired consumer at home all day (ie who would be using much of the PV output already). The company claimed the battery would allow the consumer to increase self-consumption from 25% to 80% and get £800-+ savings a year. The consumer was already consuming far above the average % of output from her small system, so the increase was almost certainly unachievable. However, even if it had been, the output of the PV system is insufficient to give savings of the magnitude of £800 annually from the battery.
- Cases where the consumers say the battery installed is not the size of battery they were promised.

We have also heard anecdotally about teams of doorknockers going round streets looking for houses with solar PV panels on the roof to try to flog them batteries.

Complaints relating to poor installation/technical problems: 20

Around one in three complaints report problems with the operation of the battery or its installation (20/61). These include:

- A battery installed such that it was not charging from the PV panels at all, but from the mains. The consumer has seen a £200+ increase in electricity bill.
- Repeated failures to sort out a faulty battery, finally resolved by the manufacturer.
- Not putting the battery where it was promised. In one instance, the battery was to be sited in the loft but couldn't go through the loft-hatch (the system has now been removed); another was put in the loft, when the consumer was told it would be in the basement; and in one case, the battery was installed, against the consumer's wishes, in a cellar which floods occasionally. The cellar has now flooded.
- Two complaints where the battery is repeatedly tripping out
- Two complaints that the battery is not properly enabled or configured
- One complaint that the battery is 'not working'.

Complaints about non-supply or delayed supply of batteries: 11

This was almost entirely a problem with one particular company (not a RECC member) that had, it appears, sold batteries that it didn't actually have. It has now gone into liquidation.

12 January 2017